Tornado Quiz

Tornado Safety Information
USAFACFS Installation/Branch Safety Office

QUESTION # 1

What is the largest number of tornadoes to occur in the U.S. in a s period ?

ANSWER

From April 3rd, 1974 to April 4th, 1974, a total of 148 tornadoes st United States. This event is known as the "Super Outbreak" Alt outbreaks since have equaled this number, the U.S. has suffered large 24 hour outbreaks, including an 84 tornado outbreak in 19 tornado outbreak in 1999.) An outbreak usually consists of six o tornadoes from the same storm system.

Among the 148 tornadoes of the "Super Outbreak", the most dev occurred in Xenia, OH where a tornado with a path 32 miles long 500 yards wide killed 36 people and injured over 1,150.

QUESTION # 2

What was the highest wind speed ever measured in a tornado

ANSWER

On May 3rd, 1999 a violent tornado struck Oklahoma City, OK and surrounding cities causing 35 deaths, 748 injuries and $ 1.485 b damage (making it the single most expensive tornado in history.)

This extreme tornado was also monitored for a part of its life by a doppler radar (a.k.a Doppler on Wheels or DOW) The results of t from the DOW stood previous estimates of possible wind speed o ears. At one point in the tornado's life, the DOW recorded a wind of 318 miles per hour (well above ground level.) This speed is th ever recorded (and once thought to be the highest attainable.) N level, winds have been measured at up to 232 mph.

QUESTION # 3

What region of the country has the highest number of tornado

ANSWER

Although the highest number of tornadoes occur in the south / c the U.S., the highest death rate occurs in the Midwest, with India Michigan, Illinois and Kentucky all in the top ten for deaths per (Ohio ranks fifth.)

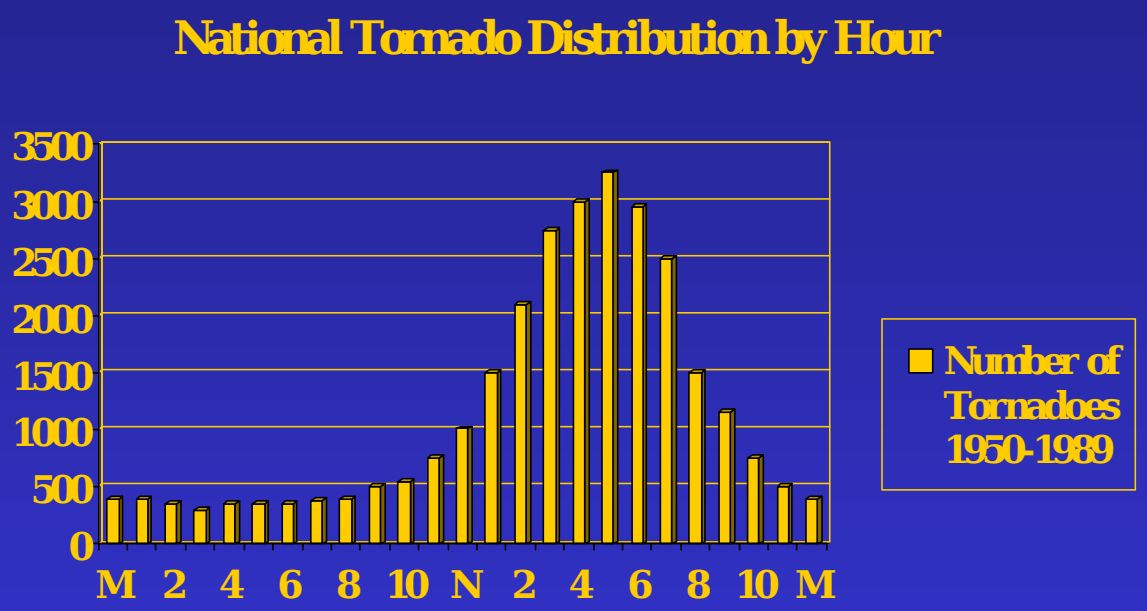
Ohio ranks 13th in the number of killer tornadoes and 21st in the of tornadoes. This should be a clue that even though tornadoes a frequent here, the ones we do get tend to be violent. (Ohio ranks the nation for killer tornadoes as a percentage of all tornadoes.)

QUESTION # 4

What is the peak hour of the day for tornado formation ?

ANSWER

**Most tornadoes occur between the hours of 3 p.m. and 9 p.m., wi
those occurring around 5 p.m.**

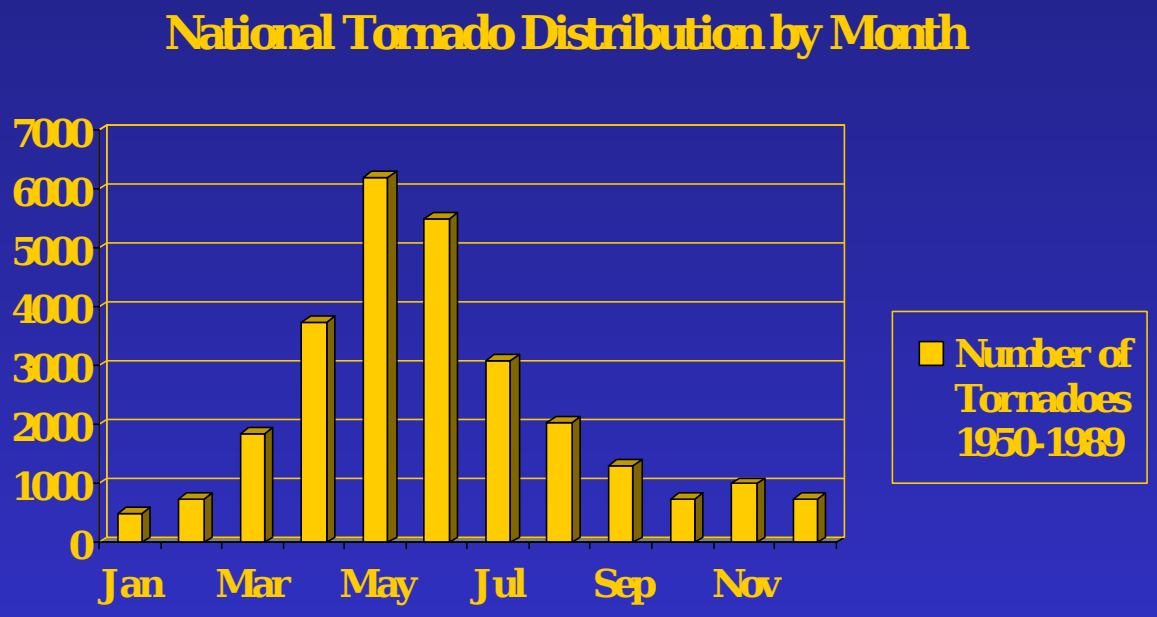


QUESTION # 5

What is the peak month for tornado formation ?

ANSWER

Nationwide, May is the peak month. In Ohio, June is the peak m

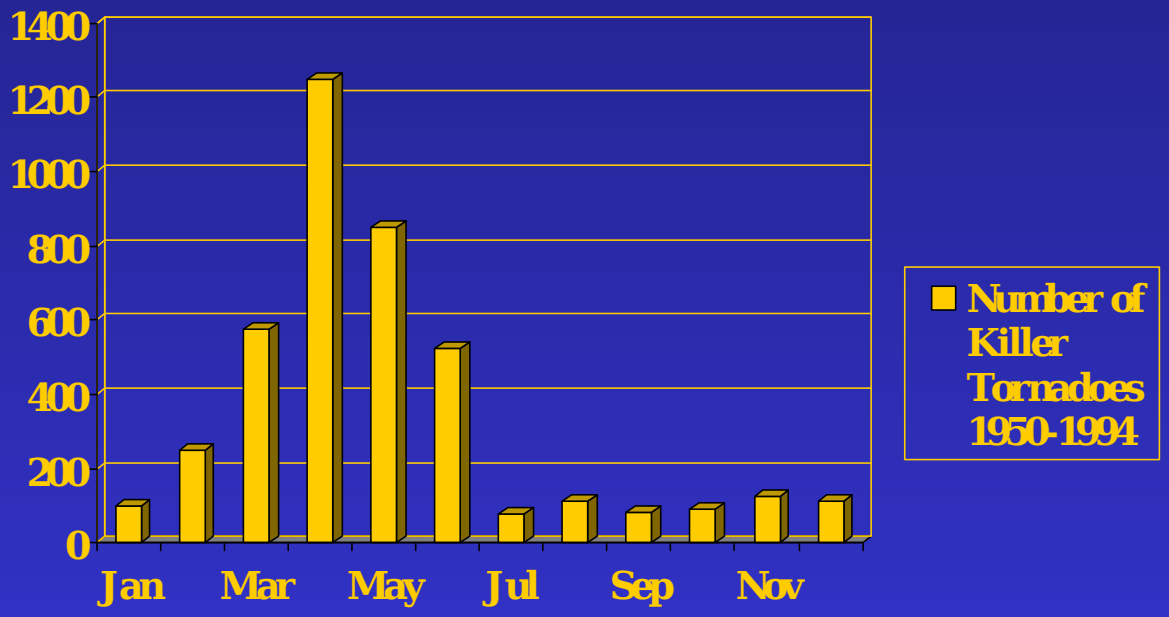


QUESTION # 6

What is the peak month for tornado deaths ?

ANSWER

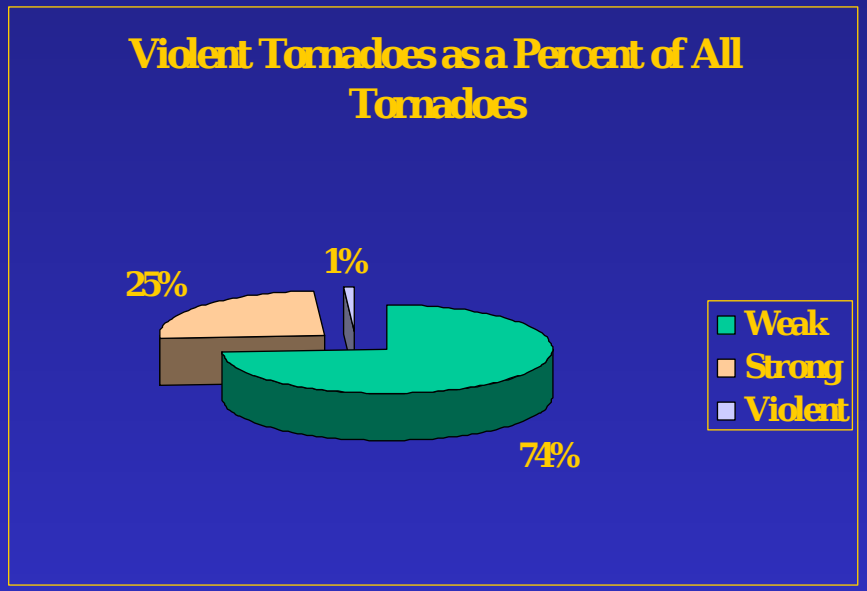
Nationwide, April is the peak month, with most deaths occurring weeks immediately following the time change. (More tornadoes o people are sleeping, and people are less reactive to severe weath in the season.)

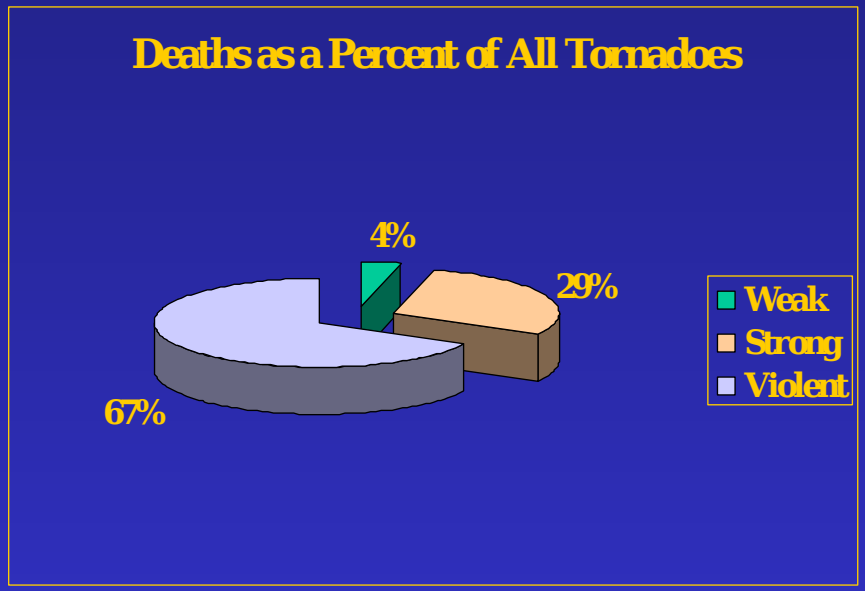


QUESTION # 7

Of all tornadoes, what percentage are classified as violent tornadoes ?
Violent tornadoes account for what percentage of deaths ?

ANSWER





QUESTION # 8

What is the difference between a tornado watch, and a tornado

ANSWER

TORNADO WATCH:

Conditions are favorable for the formation of tornadoes in, and the watch area. Persons in the watch area should be on the lookou weather, and monitor media (radio & TV) for later statements and

TORNADO WARNING:

a. A tornado has been sighted by local spotters or local officials.
b. Doppler radar indicates strong, concentrated rotation within a

Persons in the warning area should seek shelter immediately.

Note: The nationwide average warning time is 16 minutes. (Howev of Jarrel, Texas had 36 minutes of warning when a tornado struck i means that sometimes there is no warning.)

QUESTION # 9

True or False ? Tornadoes can strike major cities !

ANSWER

**TRUE ! A common misconception is that cities emit enough heat to
tornadoes, or that tall buildings interfere with a tornado's winds. M
that have been struck recently, include: Fort Worth, TX, Oklahoma
Miami, FL, Nashville, TN and Salt Lake City, UT. Historically, Dalla
Chicago, IL, Los Angeles, CA and St. Louis, MO have also all been h**

**Major cities are extremely small targets surrounded by vast expans
smaller cities. The chance of any one tornado striking a major met
is relatively small, and as such, many fewer tornadoes in major citi**

QUESTION # 10

True or False ? Mobile home parks are tornado magnets !

ANSWER

FALSE ! This is another common misconception. In the central pla tornadoes occur, trailer parks are numerous and tend to be located medium size town for convenience. When tornadoes hit trailer park is almost always complete due to the relatively poor construction of trailers. In addition, warning systems are usually not in convenient these locations, and deaths and injuries are common. The resulting makes these mobile home and trailer parks seem like tornado magn

A recent engineering study, suggests that winds as low as 60 miles p capable of demolishing a mobile home. Residents of mobile homes should seek shelter elsewhere if threatening weather occurs.

QUESTION # 10

True or False ? The F-Scale of Tornado Intensity is named after the calculated the explosive power of the atomic bomb dropped on Hi

ANSWER

TRUE ! Among Dr. Tetsuya Fujita's many accomplishments was his of blast effects in Hiroshima and Nagasaki. His studies, combined w engineering experiments allowed him to determine the explosive po Boy" atomic bomb.

Professor Ted Fujita, as he was known in the states, was also able to approximate wind speeds required to produce varying amounts of da buildings and other structures. The result of this study was the dev system with which to classify tornadoes based on wind speed. This s as the "F-Scale" or "Fujita Scale"

Dr. Fujita was also able to identify the presence of multiple vortices studying damage patterns left in the ground.

THE FUJITA SCALE OF TORNADO INTENSITY

F-Scale Rating	Description	Wind Speed (mph)	Damage
F-0	Gale Tornado	40-72	Some damage to chimneys. Breaks tree branches. Pushes over shallow-rooted trees. Damages sign boards.
F-1	Moderate Tornado	73-112	The lower limit is hurricane wind speed. Peels surfaces off roofs. Mobile homes pushed off foundations or overturned. Moving autos pushed off roads. Garages destroyed.
F-2	Significant Tornado	113-157	Considerable damage. Roofs torn off frame houses. Mobile homes demolished. Boxcars pushed over. Large trees snapped or uprooted. Light object missiles generated.
F-3	Severe Tornado	158-206	Roof & walls torn off well constructed homes. Trains overturned. Most trees in forest uprooted.
F-4	Devastating Tornado	207-260	Well constructed houses leveled. Structures with weak foundations swept away. Cars thrown. Large object missiles generated.
F-5	Incredible Tornado	261-318	Strong frame houses carried considerable distances. Automobile-sized missiles generated. Trees debarked. Asphalt pavement removed from roads. Steel-reinforced structures badly damaged.

Note: the Oklahoma City tornado of 1999 had winds at the top limit of th

Note: The heaviest object ever thrown by a tornado was a 30,000 pound

QUESTION # 11

True or False ? The safest place to seek shelter is the southwest co basement, or the side of the basement facing the approaching torn

ANSWER

FALSE ! Although the original intent was good, this misconception information provided to a large number of people. The original idea tornadoes (which frequently approach from the southwest) would bl the corner opposite the direction from which they approached. The tornadic winds are not all parallel to the direction in which the torn addition, houses often collapse before the highest winds reach them

The safest place to seek shelter from a tornado is on the lowest leve in, or under a central stairwell. Place as many walls, in all direction and the tornado, and get under a heavy frame object (such as a tabl workbench.) Covering yourself with a mattress or other object will protect you from debris. Bathrooms may offer extra protection due framing required to support the plumbing. Seeking shelter in the b mattress over you, provides some protection on all sides, as well as foundation.

QUESTION # 12

True or False ? If you are outside when a tornado strikes, seek she a highway overpass !

ANSWER

FALSE ! This has become a popular misconception, mainly due to a from an Oklahoma tornado, where the news crew takes shelter unde and survives. First and foremost, never run from a tornado, unless substantial warning, or it is obvious that the tornado is moving to y left. Many people have died in car accidents trying to flee tornadoe there is evidence that being under a bridge overpass can increase t in the form of higher winds and greater debris, in addition to the tr by people seeking shelter. See the National Weather Service report overpass deaths (this can be found at the National Weather Service http://www.srh.noaa.gov/oun/papers/overpass.html .)

If outside, when a tornado approaches, seek shelter in a building if If not, seek shelter in a ditch. Tornadic winds decrease very close t lowest few feet.) The lower you can get, the better off you are. If y abandon the car.

QUESTION # 13

True or False ? If a tornado approaches, open your windows to pre house from exploding due to the pressure drop.

ANSWER

FALSE ! Again, this was a widely accepted piece of information whe circulated. Primarily, this evolved from the idea that a tornado crea total vacuum, and your house would explode if the pressure wasn't e In reality, even in F-5 tornadoes, the pressure drops about 10%, whi can vent through normal openings (not including the ones created b about three to four seconds.

Wasting time opening the windows is dangerous, and pointless sinc frequently the first items to break in a house. In addition to the del tornado, the windows have to withstand wind pressure of up to 320 square foot (which is like setting a car on a window.) In addition, as into an open window, this exposes the load bearing walls in your hou stress, as well as creating an effect similar to blowing up a balloon. house to, guess what ? Explode !

QUESTION # 14 - FINAL JEOPARDY

What is the number one weather related killer ?

ANSWER

TRICK QUESTION !!!

Flash Flooding, not tornadoes, is the number one killer ! Flash floo people per year than lightning, tornadoes and exposure (hypotherm stresses) combined ! Don't become a casualty. Don't drive through flooded areas, and remember the water might be deeper than it look in an area prone to flooding, plan your escape route before the flood before the flood.

(Depending on the volume, water as little as three feet deep can pic sweep it downstream !)

ANY QUESTIONS